

Patent Claims

1. Connecting and deflecting element for tension members (4) of pneumatic structural elements which  
5 comprise a cylindrical, gas-tight hollow body (1) with two caps (5), and also comprise a compression member (2) between two joint elements (3) and tension members (4) which are fastened at the ends of the compression member (2), characterized in that
- 10 - means are provided in order to fit at least two tension members (4) such that a crossover location of these very tension members (4) is eliminated, but the lines of action of the tensile forces continue to intersect one another essentially at  
15 the same crossover location (7).
2. Connecting and deflecting element according to Patent Claim 1, characterized in that it is formed such that the tension members (4) are located essentially  
20 one beside the other in one plane in the connecting and deflecting element.
3. Connecting and deflecting element according to Patent Claim 1, characterized in that it is formed such  
25 that the tension members (4) are located essentially one above the other in a number of planes in the connecting and deflecting element.
4. Connecting and deflecting element according to  
30 Patent Claim 1, characterized in that it is curved such that it butts flush against the cylindrical shape of the hollow body (1).
5. Connecting and deflecting element according to  
35 Patent Claims 2, 3 and 4, characterized in that it is set up for tension members (4) which comprise at least

two cables (11).

6. Connecting and deflecting element according to either of Patent Claims 2 and 3 and Patent Claim 4,  
5 characterized in that it is set up for tension members (4) which comprise at least two cables (11).

7. Connecting and deflecting element according to Patent Claim 5 or 6, characterized in that it comprises  
10 a plate (8) which has a milled relief (9) for the tension members (4).

8. Connecting and deflecting element according to Patent Claim 7, characterized in that it is produced by  
15 a non-cutting shaping method.

9. Connecting and deflecting element according to Patent Claim 5 or 6, characterized in that it is configured as a hollow body (15).

20 10. Connecting and deflecting element according to Patent Claim 5 or 6, characterized in that it is constructed from two essentially identical parts (22, 23), in which case

- 25 - the parts (22, 23) each have at least two sockets (27) on one side,
- the parts (22, 23) have, per socket (27), a conical lead-out (28) which runs from the socket (27) to the opposite side,
- 30 - spherical-segment anchors, which fit flush in the sockets (27), are fastened at the ends of the tension members (4),
- the tension members (4) are drawn through the lead-outs (28) from the sockets (27), and the
- 35 anchors (26) abut with sliding action in the sockets (27), this counteracting the production of

bending moments at the fastening locations of the tension members (4) under tensile loading,  
- the parts (22, 23) are joined together by a screw connection (25), which can be subjected to tensile  
5 loading, such that the sockets (27) rest on one another, and the parts (22, 23) form a connecting and deflecting element with one another.

11. Connecting and deflecting element according to one  
10 of Patent Claims 7 to 10, characterized in that it is divided into two essentially identical functional halves (30) along the centre line (31) parallel to the compression member (2), each of the functional halves (30) deflecting at least one tension member (4) and  
15 being fitted on the compression member (2).

12. Connecting and deflecting element according to Patent Claim 11, characterized in that the two functional halves (30) are fastened on a plate (8) so  
20 as to produce an interspace for the compression member (2), and a second plate (14) may be fastened as a cover, with the result that the compression member (2) is enclosed.

25 13. Connecting and deflecting element according to Patent Claim 11, characterized in that introduced between the two functional halves (30) is a workpiece which can be subjected to compressive loading and can connect two pieces (20) of a compression member (2).

30 14. Connecting and deflecting element according to Patent Claim 11, characterized in that one of the parts (2, 30) has a comb-like protuberance (17) and the other has a matching groove (16), and the functional halves  
35 (30) are thus fastened on the compression member (2) by the protuberance (17) being pushed into the groove (16)

and positioned.

15. Connecting and deflecting element according to either of Patent Claims 7 and 10, characterized in that

5 it consists of a material which can be subjected to compressive loading and it can be fitted between two pieces (20) of a compression member (2).